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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,934

12/22/2004

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EXAMINER

HAILEY, PATRICIA L

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,934	Applicant(s) TOHJI ET AL.	
	Examiner PATRICIA L. HAILEY	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 19, 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-23 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☒ Claim(s) 2, 6, and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicants' remarks and amendments, filed on August 19, 2008, have been carefully considered. No claims have been canceled or added; claims 1-23 remain pending in this application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document was filed on December 22, 2004.

Withdrawn Rejections

The 103(a) rejection of claims 1-8, 12, and 19-23 as being unpatentable over Buhler et al. (U. S. Patent No. 4,484,992) stated in the previous Office Action has been withdrawn in view of Applicants' persuasive arguments traversing this rejection.

The 103(a) rejection of claims 1-3, 6-8, 10-14, and 18 as being unpatentable over Hirai et al. (U. S. Patent No. 6,051,614) stated in the previous Office Action has been withdrawn in view of Applicants' amendments and persuasive arguments traversing this rejection.

Neither Buhler et al. nor Hirai et al. teaches nor suggests the initial formation of a microscopic solid phase of cadmium hydroxide via dropping a solution of a cadmium salt into a solution of a sodium compound.

Further, although Hirai et al. disclose that the method involves obtaining aqueous dispersions of metal particles such as metal sulfides (e.g., sulfides of metals such as cadmium) by treating an aqueous solution of a metal salt with a sulfide-forming agent, the reference does not teach or reasonably suggest the formation of a catalyst having a cadmium compound shell and a void.

Maintained Rejections

The following rejections of record have been maintained; the text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Double Patenting

2. *Claims 1 and 3-5 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/507,895.*

Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to photocatalysts comprising a capsule structure comprising a cadmium compound shell and a void, and further characterized by supporting platinum thereon

The combination of claims 1 and 3-5 in the instant application reads upon that of claim 1 in the copending '895 application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

In response to Applicants' remarks regarding the double patenting rejection ("Applicants defer responding..."), this rejection is maintained pending the filing of a Terminal Disclaimer.

In response to Applicants' arguments traversing the rejection over Hirai et al., it appears that Applicants' remarks in part refer to Higo et al. (U. S. Patent No. 6,524,997), which is directed to a photocatalyst-bearing material comprising a carrier of a thermoplastic polymer, upon which is stacked particles of a photocatalyst material. Although Higo et al. teach a photocatalyst structurally similar to that instantly claimed, the reference teaches that the photocatalyst particles exhibit an average grain size of from 0.1 mm to 30 mm (100,000 to 30,000,000 nm), which is far outside the claimed "average particle diameter of 100 nm or less".

Applicants' remarks regarding the Hirai et al. and Buhler et al. references (i.e., Applicants' remarks from the bottom of page 7 to page 10) are persuasive.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICIA L. HAILEY whose telephone number is (571)272-1369. The examiner can normally be reached on Mondays-Fridays, from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PATRICIA L. HAILEY/
Examiner, Art Unit 1793
December 1, 2008